Air Products pays cash for Ashland's electronic chemicals business

In a cash transaction of approximately $300m, Air Products has signed a definitive agreement to acquire the Electronic Chemicals business of Ashland Specialty Chemical Company, a division of Ashland Inc. Subject to regulatory approvals, the acquisition is expected to be accretive to earnings in the first year. Closing would follow receipt of regulatory approvals.

Ashland's Electronic Chemicals business is an electronic service provider and supplier of ultrapure specialty chemicals for the manufacture of semiconductor devices. The business offerings include ACT photoresist strippers, etch residue strippers and low-k dielectric and copper strippers, high-purity process chemicals (HPPC), copper plating solutions, chemical mechanical planarization (CMP) slurries and post-CMP cleaners and fab services providing on-site chemical management, parts cleaning, and tool assembly and refurbishment.

"The Ashland acquisition strongly illustrates our corporate-wide strategy to identify and invest in higher growth, higher return businesses," said John P. Jones, chairman and CEO, Air Products. He continued: "Over the past year, we have reinvested more than half a billion dollars in our growth platforms, and we will continue to look for similar opportunities that effectively blend our strengths and skills with our corporate strategy."

Regarding the acquisition, Gerald Ermentrout, VP and GM of Air Products' Electronics division, added: "First, it will give us a more intimate electronic chemicals process knowledge that will enhance our ability to develop new materials and solutions. Second, Ashland's product line complements our existing portfolio and significantly expands our position in high growth specialty materials, as well as our presence in Asia. And third, our two companies have employees who share similar cultures, experiences and values such as safety, innovation, quality and customer service."

Morgan at Semicon West

At Semicon West this year, Morgan Advanced Ceramics (MAC) focused on its Chemical Vapour Deposition Silicon Carbide (CVD SiC) and Pyrolytic Boron Nitride (PBN) material solutions.

These solutions are applicable to various semiconductor processes, including: plasma oxide etch, 300mm rapid thermal processing (RTP) and epitaxial processes.

For compound-based substrate manufacturing processes, including Liquid Encapsulated Czochralski (LEC), Vertical and Horizontal Gradient Freeze (V/HGF) or Bridgeman (V/HB), MAC's PBN coating provides ultra high purity, mechanical strength, thermal stability and anisotropic behaviour.

PBN coatings and crucibles are also used in Molecular Beam Epitaxy (MBE) and Metalorganic CVD (MOCVD) production and development systems.

Patent battle

ATMI Inc subsidiary, Advanced Technology Materials Inc has filed suit against Praxair Inc, the parent company of Praxair Electronics, charging it with infringement of two patents relating to sub-atmospheric gas delivery technologies used in semiconductor fabrication processes.

Oliver Zitzmann, ATMI's chief legal officer, said: "The suit, which was filed in the United States District Court for the Southern District of New York alleges that Praxair has infringed, and is actively inducing others to infringe ATMI's United States Patent Nos. 6,101,816 and 6,343,476, related to our VAC (Vacuum-Actuated Cylinder) product. ATMI is seeking treble damages and an injunction. With more than 345 issued US patents, ATMI respects the value of intellectual property, and protects it accordingly."

Responding to the lawsuit, Mark Gruninger, VP of Praxair Electronics, said, "We believe this lawsuit is without merit and Praxair will continue to confidently market the UpTime system to our semiconductor customers."

"The uniqueness of Praxair's UpTime gas-delivery technology is confirmed by the issuance by the US Patent and Trademark Office of multiple patents as well as comparable patents issued by other countries," Gruninger added.

Emcore's GaN production technology

Emcore has introduced GaN RealTemp 200, the latest in a line of production level in-situ temperature measurement systems. Designed to give higher yield for GaN device production, allowing LED manufacturers to lower production costs, the new system aims to dramatically improve the economics of GaN manufacturing. Emcore expects the new system to be adaptable to all of its nearly 200 GaN systems deployed worldwide.

For GaN applications using sapphire or silicon carbide substrates, the system combines a high-speed infrared pyrometer and an LED-based reflectometer to directly and simultaneously measure target reflectivity and radiance. This method allows for real-time correction of emissivity during epitaxial deposition. The system enables tuning of the reactor to ensure repeatable growth temperatures over a full series of production runs. Using an integrated software package, temperature and reflectance readings can be plotted for each wafer and used to improve material quality and throughput levels on subsequent runs. With data from the system, users can refine their process through numerous analysis options, such as determining growth rates, conducting quantitative analyses of buffer layers, and estimating the composition of ternary materials.